

What is claimed is:

1. A method for inspecting an end surface of an optical connector, the connector including a housing holding an optical ferrule with an optical fiber; the method comprising:
  - (a) providing an inspection machine having a connector receipt aperture;
  - (b) releasably securing the optical connector to a cage member; and
  - (c) mounting the optical connector into the inspection machine by:
    - (i) inserting the end surface of the optical connector into the connector receipt aperture.
2. A method according to claim 1 wherein:
  - (a) the step of providing includes providing an inspection machine having a fixture defining a void;
  - (b) the step of releasably securing the optical connector to a cage member includes releasably securing the optical connector to a cage member including an extending flange; and
  - (c) the step of mounting includes:
    - (i) orienting the optical connector with the cage member to position the extending flange within the void of the fixture.
3. A method according to claim 2 wherein:
  - (a) said step of providing an inspection machine includes providing an inspection machine with a fixture defining a void, wherein the void comprises a slot defining a first width; and
  - (b) said step of releasably securing the optical connector to a cage member includes securing a cage member having an extending flange; the flange defining a second width;

- (i) the first width being no more than 0.25% larger than the second width.

4. A method according to claim 2 wherein:

- (a) said step of releasably securing the optical connector to a cage member includes securing the optical connector to a cage member having a frame and a latch arrangement extending from the frame;
  - (i) the frame defining a receiving chamber having a longitudinal axis; and
  - (ii) the extending flange being cantilevered from the frame and oriented generally normal to the longitudinal axis of the receiving chamber.

5. A method according to claim 4 wherein:

- (a) said step of releasably securing the optical connector to a cage member includes:
  - (i) inserting the optical connector into the receiving chamber; and
  - (ii) latching the cage member to the optical connector with the latch arrangement.

6. A method according to claim 5 wherein:

- (a) said step of inserting the optical connector into the receiving chamber includes aligning the optical connector with guiding ribs projecting from the frame into the receiving chamber.

7. A method according to claim 5 further including:

- (a) after said step of mounting the optical connector into the inspection machine, unmounting the optical connector from the inspection machine by:

- (i) removing the end surface of the optical connector from the connector receipt aperture; and
  - (ii) removing the extending flange of the cage member from the fixture void; and
- (b) after said step of unmounting the optical connector from the inspection machine, removing the cage member from the optical connector by releasing the latch arrangement from the optical connector.

8. A method according to claim 2 wherein:

- (a) said step of providing an inspection machine having a connector receipt aperture and a fixture defining a void includes mounting the fixture with the void onto the inspection machine.

9. A cage member for an optical connector for fixing relative rotation between the optical connector and an inspection machine, the connector including a housing holding an optical ferrule with an optical fiber; the cage member comprising:

- (a) a frame; said frame defining an optical connector receiving chamber having a longitudinal axis;
  - (i) said frame having a height;
- (b) a latch assembly; said latch assembly extending from said frame and positioned adjacent to said receiving chamber; and
- (c) a flange; said flange being cantilevered from said frame and oriented generally normal to said longitudinal axis;
  - (i) said frame and said flange defining a continuous, flat, planar end face; and
  - (ii) said flange having a height that is at least 25% more than said frame height.

10. A cage member according to claim 9 wherein:
- (a) said latch assembly extends from said frame in a direction generally parallel to said longitudinal axis.
11. A cage member according to claim 10 wherein:
- (a) said latch assembly include a latch member including:
    - (i) an extension projecting from said frame having a free end; and
    - (ii) a hook construction at said free end.
12. A cage member according to claim 9 further including:
- (a) first and second guide ribs projecting from said frame into said receiving chamber;
    - (i) said first and second guide ribs opposing each other within said receiving chamber.
13. A cage member according to claim 9 wherein:
- (a) said flange includes a pair of parallel sides terminating at a free end.
14. A cage member according to claim 13 wherein:
- (a) said flange has a height that is at least 50% more than said frame height.
15. In combination, a cage member and an optical connector, the combination comprising:
- (a) an optical connector including a housing and a clip projecting therefrom;
    - (i) said housing holding an optical ferrule with an optical fiber;
  - (b) a cage member having a frame, a latch arrangement, and a flange;

- (i) said frame defining an optical connector receiving chamber having a longitudinal axis;
  - (A) said housing being operably positioned within said chamber;
- (ii) said latch arrangement extending from said frame and positioned adjacent to said receiving chamber;
  - (A) said latch arrangement being in engagement with said optical connector clip;
- (iii) said flange being cantilevered from said frame and oriented generally normal to said longitudinal axis;
  - (A) said frame and said flange defining a continuous, flat, planar end face; and
  - (B) said ferrule projecting out of said end face.

16. A combination according to claim 15 wherein:

- (a) said latch arrangement includes a latch member including:
  - (i) an extension projecting from said frame having a free end;
  - (ii) a hook construction at said free end; and
- (b) said clip includes a pair of hooks;
  - (i) said latch member hook construction being in engagement with said pair of hooks of said clip.

17. A combination according to claim 15 wherein:

- (a) said cage member further includes a plurality of guide ribs projecting from said frame into said receiving chamber;
  - (i) said guide ribs engaging said housing.

18. A combination according to claim 17 wherein:

- (a) said flange has a height that is at least 25% more than a height of said frame.

19. A kit for use with an inspection machine for inspecting an end surface of an optical connector, the connector including a housing holding an optical ferrule with an optical fiber; the kit comprising:

- (a) a plate constructed and arranged to be mounted on the inspection machine; said plate having an edge;
  - (i) said edge defining a receiving void; and
- (b) a cage member constructed and arranged to receive the optical connector; said cage member including an extending flange;
  - (i) said extending flange being sized to project into and be received by the receiving void of the plate.

20. A kit according to claim 19 wherein:

- (a) said receiving void comprises a slot having first and second sides and an end edge;
  - (i) said first and second sides being perpendicular to said plate edge; and
  - (ii) said end edge extending between said first and second sides;
    - (A) said end edge being spaced from said plate edge by at least 0.1 inch.

21. A kit according to claim 20 wherein:

- (a) said plate includes a pair of apertures sized to receive fasteners to secure said plate to the inspection machine;
- (i) said slot being centered between said pair of apertures.

22. A kit according to claim 20 wherein:

- (a) said cage member includes a frame defining an optical connector receiving chamber having a longitudinal axis;
  - (i) said flange being cantilevered from said frame and oriented generally normal to said longitudinal axis
- (b) a latch assembly; said latch assembly extending from said frame and positioned adjacent to said receiving chamber.

23. A kit according to claim 22 wherein:

- (a) said flange includes a pair of parallel sides terminating at a free end;
  - (i) said flange parallel sides being received within said slot between said first and second sides of said slot.

24. A kit according to claim 23 wherein:

- (a) said slot has a first width extending between said slot first and second sides; and
- (b) said flanges has a second width, extending between said flange parallel sides;
  - (i) the first width being no more than 0.25% of the second width.

25. A kit according to claim 22 wherein:

- (a) said latch assembly on said cage member extends from said frame in a direction generally parallel to said longitudinal axis; and said latch assembly includes first and second spaced latch members; each of the first and second latch members having an extension projecting from said frame having a hook construction; and
- (b) said cage member further includes first and second guide ribs projecting from said frame into said receiving chamber;
  - (i) said first and second guide ribs opposing each other within said receiving chamber.

26. A fixture for use with an inspection machine for inspecting an end surface of an optical connector, the connector including a housing holding an optical ferrule with an optical fiber; the fixture comprising:
- (a) a plate; said plate including:
    - (i) a flat, planar mounting surface;
    - (ii) a front edge;
      - (A) said edge defining a receiving void;
      - (B) said receiving void including an open slot having first and second sides and an end edge;
        - (1) said end edge extending between said first and second sides; said first and second sides being perpendicular to said end edge and said front edge; said end edge being parallel to said front edge; and
        - (2) said end edge being spaced from said front edge by at least 0.1 inch.
27. A fixture according to claim 26 wherein:
- (a) said plate further includes at least one mounting aperture extending therethrough.
28. A mounting arrangement for use with an inspection machine for inspecting an end surface of an optical connector, the connector including a housing holding an optical ferrule with an optical fiber; the mounting arrangement comprising:
- (a) a cradle; said cradle being adjustable along three axes;
  - (b) a jig supported by said cradle;
  - (c) a chuck within said jig;



- (d) a fixture mounted on said jig; said fixture defining a receiving void;  
and
- (e) an optical connector mounted in a cage member;
  - (i) said optical connector including a housing holding an optical ferrule with an optical fiber;
    - (A) said optical connector being mounted within, and held by, said chuck;
  - (ii) said cage member including an extending flange;
    - (A) said extending flange being received within said receiving void of said fixture.